HP 302 Gravity Feed Hi-Performance Paint Spray Gun

INSTRUCTION MANUAL

3021-53-1911

HP302

Model HP302 is an external mix, high capacity spray gun, designed for high quality production spraying of paint and other finishing material from gravity plasitic cup.

The material inlet is located directly on the top of the spray gun and the air inlet is located at the bottom of the spray gun handle. The fluid control knob and air control knob are both located at the rear of the spray gun. The pattern control knob is located at the left side of the spray gun.

SPECIFICATIONS

Air Inlet.....1/4 NPSM
(Subject to change, based on requirement)
Maximum Air Pressure.....100 psi.
Recommended Operating
Air Pressure Range.....40-70 psi.
Air Consumption.....12 cfm @ 60 psi.
Net Weight.....1.6 lb.
Cup.....600c.c.
Recommended spray distance; 8"-10"

FLUID NOZZLES

PART NUMBER	ORIFICE DIAMETER
HP302-14*	1.4mm(.055")
HP302-17	1.7mm(.067")
HP302-20	2.0mm(.079")

*Standard size, supplied with gun but for correction please check with the hi-lighting on the side pannel of color box. Other nozzle sets should be ordered separately. A set comprises of air cap, fluid nozzle and fluid needle.

DO NOT ASSUME that you are totally familiar with this unit until after having read ALL warning tags, labels, nameplates, instruction sheets and any other explanatory material completely and thoroughly. To avoid accidents, this should be done by All persons before attempting to operate, assemble or disassemble the gun or any other part of the system.

Before disassembly or removal of any part of gun or attached components; shut off compressor, release pressure by depressing trigger, and disconnect power source. NEVER assume system pressure is zero !

Protect all lines against damage. AVOID RISK. If uncertain as to safe condition of hoses, replace with same type of a suitable replacement. (DO NOT Repair)

To avoid creating an explosive atmosphere, work only in well-ventilated areas.

Use of a face mask is recommended to prevent inhalation of toxic material.

DO NOT attempt to unclog (backflush) spray gun by squeezing trigger while holding finger in front of fluid nozzle.

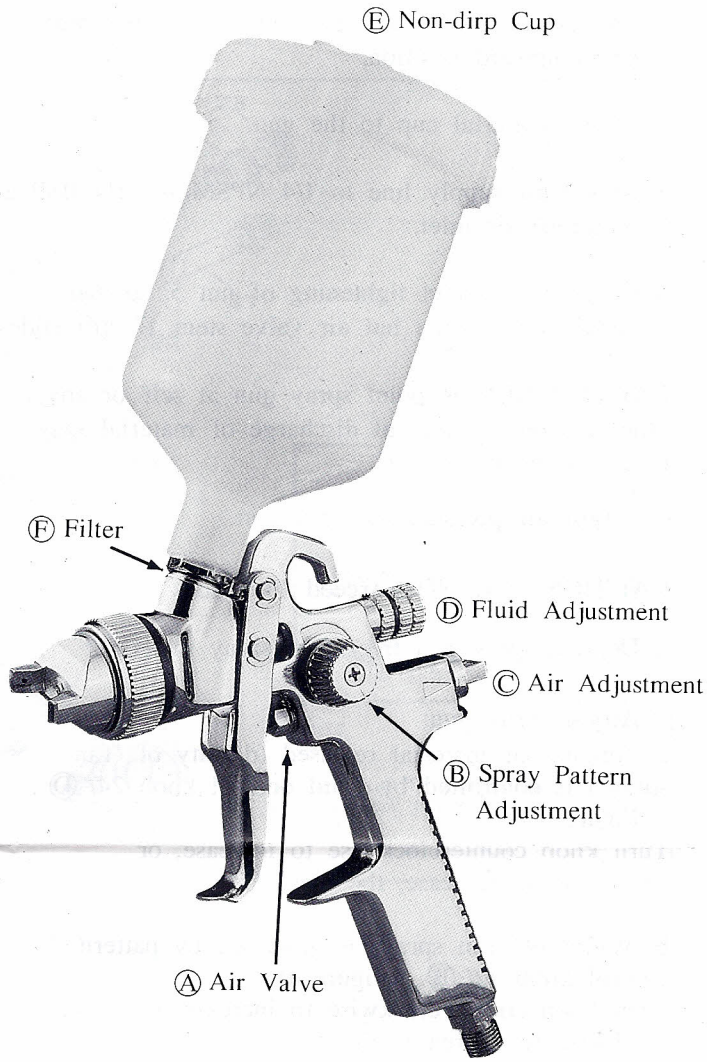

Fig. 1

Pressure may vary according to viscosity of material used. Maximum working pressure of gun is 100 psi. DO NOT EXCEED PRESSURE LIMIT OF GUN OR ANY OTHER COMPONENT IN SYSTEM !

Prior to daily operation, make certain that all connections and fittings are secure. Check hose and all connections for a weak or worn condition that could render system unsafe. All replacement components such as hose or fittings must have a working pressure equal to or greater than system pressure.

WARNING

Halogenated hydrocarbon solvents— for example: 1,1,1- trichloroethane and methylene chloride- can chemically react with the aluminum in this gun and cause an explosion hazard. Read the label or data sheet for the material you intend to spray. Do not use spray materials containing these solvents with this spray gun.

OPERATION

Prior to shipment, this gun was treated with an anticorrosive agent, before using this gun make sure that it is carefully flushed with thinner.

1. Tighten air cap which its stamping number must be in upward position.

2. Attach material cup to the gun.

3. Attach air supply line to 1/4 NPSM (or 1/4 BSP as required) air inlet.

4. Check for correct tightening of nut 5, so that no air will escape but air valve stem 17 still slides.

CAUTION:NEVER point spray gun at self or any other person. Accidental discharge of material may result in serious injury.

5. Adjust air pressure to spray gun.

CAUTION : DO NOT exceed 100 psi.

6. Depress spray gun trigger to spray material.

7. Adjust spray gun:
a. Amount of material released (density of "fan spray") is controlled by fluid oontrol knob 24/ Ⓓ . (Figure 1) .
Turn knob counterclockwise to increase, or clockwise to decrease, the fluid flow.

b. Width of "fan spray" is governed by pattern control knob 12/ Ⓑ . (Figure 1)
Trun knob counterclockwise to increase, or clockwise to decrease, air flow.

c. Air quantity is controlled by Air-Volume control knob 20/ Ⓒ . (Figure 1)
Turn knob counterclockwise to increase,or clockwise to decrease, the Air flow.

NOTE : Care should be exercised when handling spray gun to avoid damage to the orifice of the air cap and tip of fluid nozzle. damage to these parts will result in irregular spray patterns.

MAINTENANCE

It is important that spray gun be cleaned after daily use. Cleaning is accomplished by spraying appropriate solvent or thinner through system. Wipe exterior of spray gun with solvent soaked cloth or use attached brush to remove any accumulated material.

1. Exchange of nozzle set

When changing to another nozzle, make sure that the complete nozzle set is exchanged. A set comprises of air cap, paint nozzle and fluid needle.
Assemble fluid nozzle before putting in fluid needle.

2. Exchange of the self-tensioning needle Packing

The fluid needle seal 3 is effected by a Teflon Packing with self-tensioning compression spring 4. To change the packing during general overhaul, please use the socket spanner 29 provided.

3.Cleaning

(a)Empty material from gravity feed cup and replace with a suitable solvent.

(b)Operate trigger until all material traces have disappeared and gun is thoroughly clean.

(c)Wipe gun exterior with a solvent dampened cloth or provided brush 32.

NOTE : If fluid nozzle 1-2* is to be removed for thorough cleaning squeeze trigger to prevent damage of fluid needle tip 1-3* when unscrewing nozzle.

CAUTION : Always exercise extreme care when using any solvent or thinner. Never clean gun near fire, flame, or any source of heat or sparks. Properly dispose of used cleaning materials.

CAUTION : DO NOT soak entire spray gun in solvent or thinner in a longer period of time as this will destroy lubricants and possibly makes motion unsmooth. NEVER use lye or caustic alkaline solutions for cleaning. Such solutions will attack aluminum alloy parts of gun.

IMPORTANT : Make certain that air cap and fluid nozzle are kept clean at all times. If necessary, remove these two components and soak them in solvent.
DO NOT use metal instruments to clean air cap or fluid nozzles as an irregular spray pattern may result.

The following lubrication procedures after thorough cleaning the gun must be observed to ensure effective, high quality performance of spray gun.

1. Lubricate working points 17, 1-3* & 9 with straight mineral oil, or castor oil.

2. Periodically, place a few drops of oil on tapered sections of fluid nozzle 1-2* to ensure easy operation of air cap. When spraying water base materials, coat fluid nozzle inside and outside with straight mineral oil after each use.

3. Outer diameter of needle sleeve 1-3* of fluid needle assembly must be lubricated occasionally with straight mineral oil.

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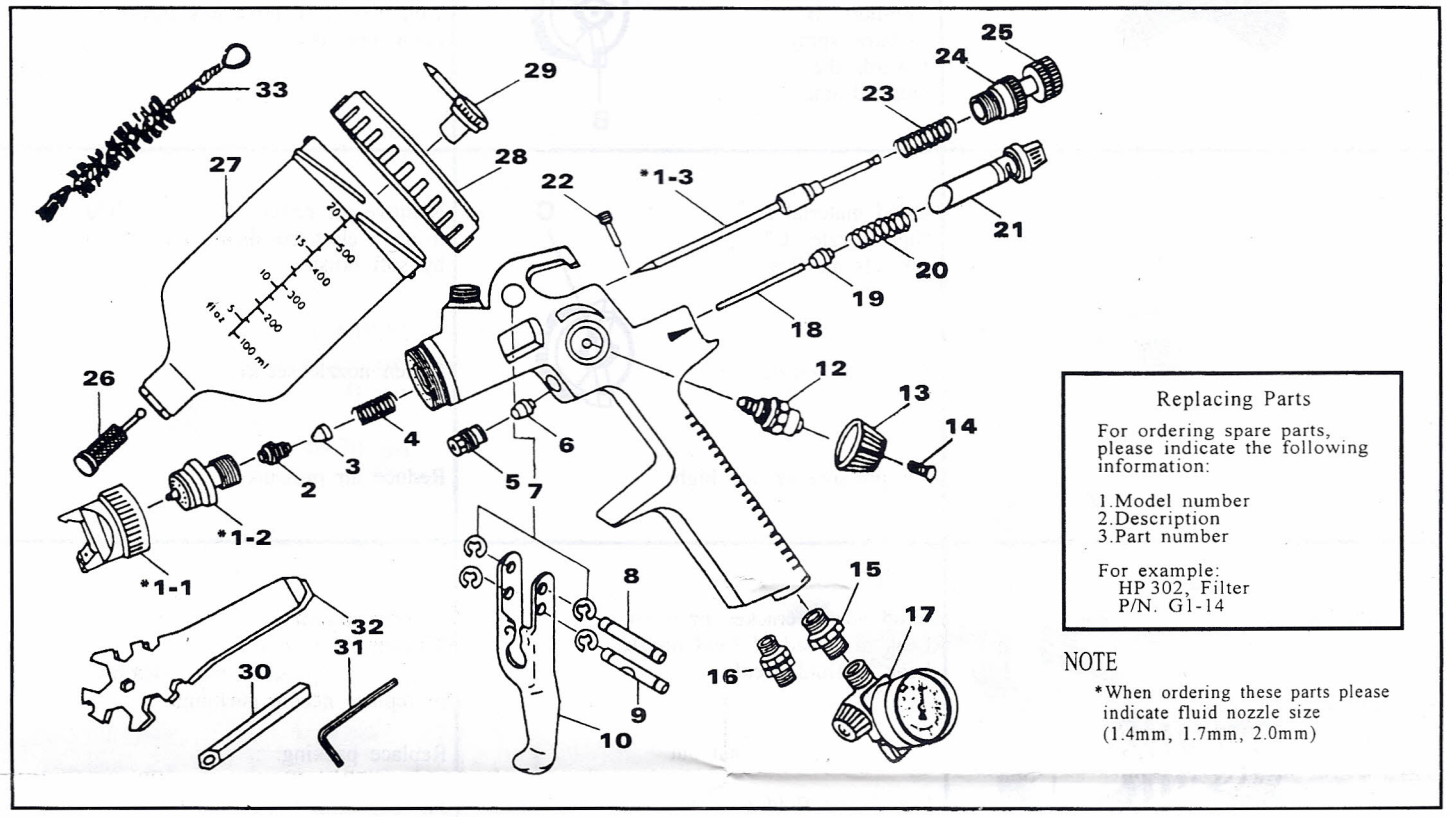

Replacing Parts

For ordering spare parts, please indicate the following information:

1.Model number
2.Description
3.Part number

For example:
HP 302, Filter
P/N. G1-14

NOTE

*When ordering these parts please indicate fluid nozzle size (1.4mm, 1.7mm, 2.0mm)

REF. NO.	DESCRIPTION	PART NO.	Q'TY
1-1*	Air cap	HP302-81	1
1-2*	Fluid nozzle	HP302-82	1
1-3*	Fluid needle	HP302-83	1
2	Needle packing nut	HP302-02	1
3	Needle packing-teflon	HP302-03	1
4	Spring for needle packing	HP302-04	1
5	Valve seat	HP302-41	1
6	Teflon packing for air valve	HP302-42	1
7	E-04 snap ring	HP302-71-1	4
8	Trigger pin	HP302-71-3	1
9	Fluid needle pin	HP302-71-4	1
10	Trigger	HP302-71-2	1
12	Pattern adjustment valve set	HP302-71-14	1
13	Pattern adjustment knob	HP302-72-5	1
14	Screw	HP302-72-6	1
15	Air inlet	HP302-51	1
16	Swivel Joint for air inlet (optional)	HP302-52	1

REF. NO.	DESCRIPTION	PART NO.	Q'TY
17	Regulator (optional)	HV302-53	1
18	Air valve stem	HV302-43	1
19	Air valve	HV302-43-1	1
20	Spring	HV302-44	1
21	Air control valve set	HP302-45	1
22	Threaded pin for air valve	HP302-46	1
23	Fluid needle spring	HP302-22	1
24	Counter ring	HP302-23	1
25	Fluid control knob	HP302-24	1
26	Filter	G1-14	1
27	Gravity cup	G1-12	1
28	Cup lid	G1-15	1
29	Plug	G1-16	1
30	Socket spanner	HP302-63	1
31	Socket wrench	HP302-91	1
32	Spanner	HP302-92	1
33	Brush	HP302-94	1

TROUBLESHOOTING

Defective Pattern	Likely Cause	Suggested Remedy
A	Dried material is clogging side-port "A" and causing side-port "B" to blow spray towards the clogged side.	Soak side-ports in thinner to clean clog. Do NOT poke any opening with metal objects.
B	Dried material at fluid nozzle "C" restricts air flow. Loose air nozzle. Air pressure set too high.	Remove air nozzle. Wipe off fluid tip using a cloth socaked in thinner or by soft brush. Fasten nozzle securely. Reduce air pressure.
C. Spitting, irregular or fluttering spray	Fluid nozzle cracked or worn. Leak at thread of fluid nozzle. Leak at fluid needle. Needle Packing woun out Insufficient fluid in cup. Vent hole in container cover clogged.	Tighter or replace. Tighten fluid nozzle. Tighten compression nut assembly or replace needle packing. Replace packing. Fill cup with fluid. Clean out vent.
D. Split spray pattern	Air pressure too high.	Turn Pattern control knob C/W to decrease fan width. Turn fluid needle adjusting nut Cc/W to increase fluid flow.
E. Unatomized or spattered spray	Material too heavy. Insufficient air pressure. Fluid pressure too high. Dried material on tip of fluid nozzle or air jets of air cap.	Thin material or use larger orifice fluid nozzle set. Increase pressure to within limit. Reduce pressure. Clean.
F. Inadequate air delivery	Air needle partially closed. Dried material in air jets of air cap. Obstruction in air line.	Open control knob. Clean. Remove obstruction.
G. Exessive fog	Air pressure too high for viscosity of fluid.	Reduce air pressure and/or open fluid control knob.
H. Material leaking from fluid inlet of cup.	Loose cup or foreign substances on/between cup thread and Fluid inlet.	Tighten and clean or replace it.
I. Material leak from nozzle when trigger is released.	Worn fluid needle. Dried material in tip of nozzle. Loose packing nut	Replace. Clean. Tighten Needle packing nut by counterclockwise.